

### **ABSTRACT OF THE DISCLOSURE**

The present invention relates to a method of culturing peripheral lymphoid organ cells on a three-dimensional scaffolding which is covered or  
5 surrounded with culture medium, under conditions effective to generate and maintain mature and functional lymphoid cells, where the three-dimensional scaffolding allows cells in the culture medium to have cell to cell contact in three dimensions. The present invention also provides methods of screening for vaccine candidates for efficacy in eliciting an immune response, identifying genes or proteins which are  
10 related to peripheral lymphoid organ cell formation or function, screening for drugs effecting peripheral lymphoid organ cell maturation, treating a patient for a disease condition using antigen-specific lymphoid cells, and effecting gene expression of peripheral lymphoid organ cells.